

[Translation]

AMENDMENT

(Amendment under Article 11 of the Law)

4. Object of Amendment Scope of Claims

5. Contents of Amendment

Scope of Claims 1, 7, 8 and 22 are amended, and claims 6, 17, and 24 are deleted.

6. List of Attached Documents

(1) Scope of Claims, Pages 24 to 27 of the Japanese claims (corresponding to pages 27-32 of the English translation thereof)

WHAT IS CLAIMED IS:

1. (Amended) An electronic device having a body and a lid comprising:

a spindle portion including a mechanism for supporting and permitting the lid to be swung in a direction that said lid is opened from a closed position where the lid is closed by folding with respect to the body;

a biasing mechanism provided on said spindle portion for biasing said lid in the direction that the lid is opened, thereby enabling the lid to perform an opening operation; and

a damper mechanism for damping the opening operation of said lid, the damper mechanism being arranged to perform no damping operation during a state in which said lid, when opened, is in a range from a fully closed position to an angle less than or equal to a predetermined angle, the damper mechanism being also arranged to operate damping of the opening operation of said lid during a state in which said lid is opened through an angle in excess of the predetermined angle;

wherein said damper mechanism includes an engaging mechanism; and the engaging mechanism includes a shaft that releases interlocking with said lid during a state in which the lid, when opened, is in a range from a fully closed position to an angle less than or equal to a predetermined angle, and interlocks with said lid during a state in which the lid is opened through an angle in excess of the predetermined angle.

2. The electronic device according to claim 1, wherein said spindle portion includes a lock mechanism for holding said lid at the closed position when the lid is located at the closed position, and a release mechanism for releasing the holding of the lid by the lock mechanism.

3. The electronic device according to claim 2, wherein said lock mechanism holds said lid at the closed position in a state in which a biasing force by the biasing mechanism is permitted to be accumulated.

4. The electronic device according to claim 2, wherein: said spindle portion includes a cam structure; said release mechanism includes a portion that is moved in response to a releasing manipulation, the release mechanism being connected to the cam structure via said portion; and the lid starts to be moved in an opening direction in response to the releasing manipulation.

5. An opening/closing mechanism for the electronic device according to claim 1, further comprising at least one additional spindle portion, wherein each of the biasing mechanism and the damper mechanism is provided on a different one of the spindle portions.

6. (Deleted)

7. (Amended) An opening/closing mechanism for the electronic device according to claim 1, wherein: the damper mechanism includes a substantially cylindrical container filled with a viscous medium; and said shaft has a blade body in the viscous medium and is rotatably supported.

8. (Amended) An opening/closing mechanism for an electronic device including a body and a lid, comprising:

a spindle mechanism for supporting and permitting said lid to be swung in a direction that the lid is opened from a closed position that the lid is closed by folding with respect to the body;

a biasing mechanism for biasing said lid in the direction that the lid is opened, thereby enabling the lid to perform an opening operation; and

a damper mechanism for damping the opening operation of the lid, the damper mechanism being arranged to perform no damping operation during a state in which the lid, when opened, is in a range from a fully closed position to an angle less than or equal to a predetermined angle and to operate damping of the opening operation of the lid during a state in which the lid is opened through an angle in excess of the

predetermined angle;

wherein said damper mechanism includes an engaging mechanism; and the engaging mechanism includes a shaft that releases interlocking with said lid during a state in which the lid, when opened, is in a range from a fully closed position to an angle less than or equal to a predetermined angle, and interlocks with said lid during a state in which the lid is opened through an angle in excess of the predetermined angle.

9. The opening/closing mechanism for an electronic device according to claim 8, further comprising: a lock mechanism for holding the lid at the closed position when the lid is located at the closed position; and a release mechanism for releasing the holding operation by the lock mechanism.

10. The opening/closing mechanism for an electronic device according to claim 9, wherein said lock mechanism holds said lid at the closed position in a state in which a biasing force by the biasing mechanism is caused to be accumulated.

11. The opening/closing mechanism for an electronic device according to claim 9, wherein said release mechanism includes a portion that is moved in response to a releasing manipulation when the releasing manipulation is performed, and said portion is connected to the lock mechanism to release the holding operation.

12. The opening/closing mechanism for an electronic device according to claim 11, further comprising a cam structure, said portion of the release mechanism being connected to the cam structure to permit the lid to start moving in an opening direction.

13. The opening/closing mechanism for an electronic device according to claim 8, wherein the biasing mechanism comprises an elastic member, and the lid is biased due to a restoration force of the elastic member.

14. The opening/closing mechanism for an electronic device according to claim 13,

wherein said elastic member comprises a coil spring.

15. The opening/closing mechanism for an electronic device according to claim 8, wherein said biasing mechanism and said damper mechanism are disposed to be combined respectively with different portions of said spindle mechanism.

16. The opening/closing mechanism for an electronic device according to claim 8, further comprising at least one additional spindle mechanism, wherein each of the biasing mechanism and the damper mechanism is combined with a different one of the spindle mechanisms.

17. (Deleted)

18. The opening/closing mechanism for an electronic device according to claim 8, wherein said damper mechanism has a structure that produces a damping force by using the viscosity of a viscous medium.

19. The opening/closing mechanism for an electronic device according to claim 17, wherein: the damper mechanism includes a cylindrical container filled with a viscous medium; and said shaft has a blade body in the viscous medium and is rotatably supported.

20. The opening/closing mechanism for an electronic device according to claim 8, wherein said predetermined angle is less than or equal to 90°.

21. The opening/closing mechanism for an electronic device according to claim 8, wherein said electronic device is a cellular phone device having a receiver portion provided in said lid.

22. (Amended) A folding type electronic device wherein there is provided a lid that is

swingable with respect to a body, the electronic device being characterized by comprising:

a shaft portion serving as a rotation axis about which the lid is swung;

biasing means provided in said shaft portion for biasing said lid in an opening direction, thereby causing the lid to be opened;

lock means for maintaining a closed position of said lid in a state in which an elastic force of said biasing means is accumulated; and

damper means provided in said shaft portion;

said damper means comprising: an engaging portion that is rotated interlocking with swinging of said lid; a shaft portion that is rotated and interlocked via the engaging portion with the swinging of the lid; and a resistor member connected to the shaft portion and arranged to perform damping of a biasing force of said biasing means in response to the rotation of the shaft portion;

wherein when the lid is positioned within a predetermined opening angle range, said shaft portion is released from interlocking with the lid being swung, and does not rotate and said resistor member does not perform damping of the biasing force; and when the lid is positioned outside the predetermined opening angle range, said engaging portion is rotated interlocking with the lid being swung so that said resistor member performs damping of the biasing force.

23. The electronic device according to claim 22, characterized in that said biasing means and said damper means are comprised of mutually independent components.

24. (Deleted)

25. The electronic device as described in claim 22, characterized in that the predetermined opening angle range of said lid is from a fully closed state of the lid to 90°.

26. The electronic device as described in claim 24, characterized in that: said biasing

means is accommodated in a substantially cylindrical housing; said resistor member produces a damping force by virtue of a viscous material filled in a substantially cylindrical case; and rotation preventing means for said shaft portion is provided on outer circumferences of said housing and said case.

手 続 補 正 書

(法第 1 1 条の規定による補正)



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4. 補正の対象 請求の範囲

5. 補正の内容

請求の範囲の請求項 1、7、8 及び 22 を補正し、請求項 6、17
及び 24 を削除する。

6. 添付書類の目録

(1) 請求の範囲第 24 頁乃至第 27 頁

請求の範囲

1. (補正後) 本体と蓋体を備える電子機器であって、

前記蓋体を、本体に対し折り畳まれるように閉じられる閉止位置から開かれる方向に回動可能に支持する機構を備えた支軸部と、

前記支軸部に配設され、前記蓋体を開く方向へ付勢して、蓋体を開放動作させる付勢機構と、

蓋体の開放動作を制動するダンパ機構であって、前記蓋体が開かれる際に、蓋体が閉止位置から所定の角度以下にあるときは制動動作を行わずに、蓋体が前記所定の角度を越えて開かれるときに、蓋体の開放動作を制動するよう動作するダンパ機構と、

を備え、

前記ダンパ機構は係合機構を備え、係合機構は前記蓋体が開かれる際に、蓋体が閉止位置から所定の角度以下にあるときは前記蓋体との連動を解除し、蓋体が前記所定の角度を越えて開かれるときには前記蓋体と連動する軸を備える、電子機器。

2. 前記蓋体が閉止位置にあるとき、その位置を保持するロック機構と、ロック機構による保持動作を解除するための解除機構を、支軸部にさらに備える、請求項1の電子機器。

3. 前記ロック機構が付勢機構による付勢力を蓄積させる状態で、前記蓋体を閉止位置に保持する、請求項2の電子機器。

4. 前記支軸部はカム構造を備え、前記解除機構は解除操作により移動される部位を備え、その部位を介してカム構造に連結し、解除操作により蓋体は開く方向に移動を開始する、請求項2の電子機器。

5. 少なくともさらに1つの支軸部を備え、付勢機構とダンパ機構とがそれぞれ異なる支軸部に配設される、請求項1の電子機器の開閉機構。

6. (削除)

7. (補正後) 前記ダンパ機構は粘性媒体を充填した略円筒状の収容器を備え、前

記軸はその媒体内に翼体を有して、回転可能に軸支される、請求項 1 の電子機器の開閉機構。

8. (補正後) 本体と蓋体を備える電子機器の開閉機構であって、

前記蓋体を、本体に対し折り畳まれるように閉じられる閉止位置から開かれる方向に回転可能に支持する支軸機構と、

前記蓋体を開く方向へ付勢して、蓋体を開放動作させる付勢機構と、

蓋体の開放動作を制動するダンパ機構であって、前記蓋体が開かれる際に、蓋体が閉止位置から所定の角度以下にあるときは制動動作を行わずに、蓋体が前記所定の角度を越えて開かれるときに、蓋体の開放動作を制動するよう動作するダンパ機構と、

を備え、

前記ダンパ機構は係合機構を備え、係合機構は前記蓋体が開かれる際に、蓋体が閉止位置から所定の角度以下にあるときは前記蓋体との連動を解除し、蓋体が前記所定の角度を越えて開かれるときには前記蓋体と連動する軸を備える、電子機器の開閉機構。

9. 前記蓋体が閉止位置にあるとき、その位置を保持するロック機構と、ロック機構による保持動作を解除するための解除機構を、さらに備える、請求項 8 の電子機器の開閉機構。

10. 前記ロック機構が付勢機構による付勢力を蓄積させる状態で、前記蓋体を閉止位置に保持する、請求項 9 の電子機器の開閉機構。

11. 前記解除機構は、解除操作がなされるときに、解除操作により移動される部位を備え、その部位はロック機構に連結されて保持動作を解除する、請求項 9 の電子機器の開閉機構。

12. 開閉機構はカム構造をさらに備え、解除機構の前記部位はカム構造に連結されて蓋体を開く方向に移動を開始させる、請求項 11 の電子機器の開閉機構。

13. 付勢機構が弾性部材を備え、弾性部材の復元力が蓋体を付勢する、請求項 8 の電子機器の開閉機構。

14. 前記弾性部材がコイルバネを備える請求項 13 の電子機器の開閉機構。

15. 前記付勢機構と前記ダンパ機構とは、それぞれ前記支軸機構の異なる部位に組み合わされるよう配置される、請求項8の電子機器の開閉機構。

16. 少なくともさらに1つの支軸機構を備え、付勢機構とダンパ機構とがそれぞれ異なる支軸機構に組み合わされる、請求項8の電子機器の開閉機構。

17. (削除)

18. 前記ダンパ機構は粘性媒体の粘性を利用して制動力を発生させる構造を有する、請求項8の電子機器の開閉機構。

19. 前記ダンパ機構は粘性媒体を充填した略円筒状の収容器を備え、前記軸はその媒体内に翼体を有して、回転可能に軸支される、請求項8の電子機器の開閉機構。

20. 前記所定の角度が 90° 以下の角度である、請求項8の電子機器の開閉機構。

21. 前記電子機器が携帯電話装置であり、携帯電話装置は前記蓋体に受話部を備える、請求項8の電子機器の開閉機構。

22. (補正後) 本体に対して回転可能な蓋体が設けられた折り畳み式の電子機器において、

前記蓋体の回転中心となる軸部と、

前記軸部に配設され、前記蓋体を開放させる方向へ付勢して、蓋体を開放させる付勢手段と、

前記付勢手段の付勢力を蓄積した状態で前記蓋体の閉止状態を保持するロック手段と、

前記軸部に配設されたダンパ手段と、

を備え、

前記ダンパ手段は、前記蓋体の回転に連動して回転する係合部と、係合部を介して前記蓋体の回転に連動して回転するシャフト部と、シャフト部に連結されシャフト部の回転に連動して前記付勢手段の付勢力を制動する抵抗部材とで構成され、前記蓋体の所定の開放角度範囲内では前記シャフト部は前記蓋体の回転との連動を解除されて回転せず前記抵抗部材は付勢力の制動を行わず、前記蓋体の所

定の開放角度範囲外では前記係合部が蓋体の回動に連動して回転し前記抵抗部材が付勢力を制動を行うように成されていることを特徴とする電子機器。

23. 前記付勢手段と前記ダンパ手段を、互いに独立した別部品で構成したことを特徴とする請求項22に記載の電子機器。

24. (削除)

25. 前記蓋体の所定の開放角度範囲内が、蓋体の全閉状態から90°までの間であることを特徴とする請求項22に記載の電子機器。

26. 前記付勢手段が略円筒状のハウジング内に収納され、前記抵抗部材が略円筒状のケース内に充填された粘性部材で制動力を発揮し、前記ハウジング及び前記ケースの外周面に、前記軸部に対する回り止め手段を設けたことを特徴とする請求項22に記載の電子機器。